

Minutes of the Meeting of Select States having significant water quality problems and on Strategies to tackle them held on 17/9/2010

Shri A. K. Misra, Secretary (DW&S) chaired the meeting of select States having significant water quality problems and on Strategies to tackle them, held on 17/9/2010. List of participants is annexed.

2. The Chairman welcomed all participants and said that there are 1.44 lakh water quality affected habitations that need to be covered at the earliest. The Chairman also wanted to know from the participating states as to what type of specific schemes have been undertaken to cover water quality affected habitations He said that water quality issue should be treated as a core issue and informed that PMO is monitoring the coverage of water quality affected habitations. He further informed that DDWS is also modifying online IMIS system and requested all participating States to update their data at the earliest.

3. Shri T.M.Vijay Bhaskar, Joint Secretary said that States should try to cover all water quality affected habitations by March 2012 and they should start addressing the same on a war footing from now so that there is less pressure in the coming year.

4. JS(DWS) also made a presentation on overall status of water quality affected habitations in India as well as state-wise status of coverage and other issues. The issues identified for discussion were as follows:

- States should have targeted atleast half of the water quality affected habitations mentioned on online IMIS on 01/04/2010 in AAP 2010-11. However, many states have set low targets of covering water quality affected habitations in 2010-2011.
- As reported on online IMIS , coverage of water quality affected habitations is low. Large number of water quality affected habitations are still to be covered.
- About 100 districts in the country are not having water quality testing laboratory.
- Many districts are not having adequate manpower in the district water testing laboratory.
- Large number of drinking water sources in States are not reported as tested.
- The required number of grass root workers in GPs are yet to be trained for using field test kits.
- Progress of implementing Jalmani programme in many States is slow.

JS (DWS) requested the participating States to explain their strategy to cover the target habitations in this year and urged to use efficient, effective and cost effective treatment technologies to treat drinking water in rural areas.

5. Thereafter the review of state-wise status on water quality issues was taken by the Chairman. Salient observations of the deliberations were as follows:

5.1 Assam

Shri Dilip Kumar Das, Additional Chief Engineer PHED, Government of Assam said that Assam has proposed to cover 121 arsenic affected habitations (out of 2599 arsenic affected habitations), all 248 fluoride affected habitations and 3879 iron affected habitations (out of 17692) by 2010-11. He said that balance 2478 no. of arsenic affected habitations will be covered by the end of 2011-2012 and 13,813 iron affected habitations will be covered by the end of 2013-2014.

The Chairman said that IMMT Bhubaneswar has an efficient and cost effective technology for iron removal from drinking water and the same may be used in other States for treating iron from drinking water. He also advised that the Karnataka model for iron removal in drinking water may be used in Assam and elsewhere where iron is a major drinking water quality problem. He directed DA(DR) that this model may be sent to predominantly iron affected States for replication.

It was also noted that by just keeping the water still for few hours in a pot, the dissolved iron content gets oxidized and settles down. The people should be made aware about this through an IEC campaign. The State was asked to relook the targets for 2010-11 and try to increase the coverage of iron affected habitations. It was also asked to give approval for projects in all newly identified arsenic affected areas by December, 2010. All Jalmani targeted schools should be covered by year end.

5.2 Bihar

Shri Ravindra Panwar, Pr. Secretary, PHED, Govt. of Bihar said that drinking water in Bihar also has almost the same quality problems as in Assam.. Iron in drinking water quality is a major concern along-with fluoride and arsenic. He said that all districts in Bihar have water quality testing labs and FTK's have also been distributed in all GP's. He also said that the State and district laboratories are functional in Bihar. However, maintenance of water treatment units is a major problem as panchayat system in Bihar doesn't work at all and there is no feeling of collective responsibility.

Replying as to why the target of covering water quality affected habitations in Bihar is low in 2010-2011, it was informed that land acquisition for water treatment system is a major problem. Shri Panwar further informed that during this financial year approximately 350 arsenic affected habitations will be covered though only 93 water quality affected habitations have been reported on online IMIS. He also accepted that last year Jalmnani programme was wrongly reported on online IMIS and the same is being rectified. He said that they would also cover 385 fluoride affected habitations this year and 1000 in 2011-12.

The Chairman mentioned that the only way to address the water quality affected habitations effectively in rural areas is to convince and enable panchayats to manage the system. He suggested to implement IEC campaign more effectively. Merely publishing glossy IEC materials and distributing it is not a proper IEC strategy.

Chairman requested Shri Panwar to reduce their huge Opening Balance. The Chairman also gave his consent during the course of discussion to send a team to Bihar to assess the situation and to devise strategy for better and timely implementing all water related schemes in rural areas of Bihar.

It was noted that Tamil Nadu is leading in developing and technically designing village ponds. By adopting proper catchment treatment and laying of proper supply channels, siltation of these village ponds can be reduced to a great extent. This can be replicated in Bihar in arsenic and fluoride affected habitations. Further, a manual on various technologies for effectively treating specific water contaminants has already been distributed which may be used as immediate solution. Dilution through artificial recharge is one of the sustainable technologies to reduce concentration of fluoride and other contaminants apart from increasing the specific yield of aquifers. During the discussions, Chairperson suggested that the PHED labs should also have provision to test water samples of urban local bodies and of private parties on payment basis.

5.3 Chhattisgarh:

Shri Dinesh Shrivastava, Secretary-PHED, Government of Chhattisgarh informed that Chhattisgarh has convergence of drinking water schemes with MNREGS. He also said that the State has taken steps to introduce one chapter on water and sanitation in school curriculum as extensive mining in Chhattisgarh is destroying the eco-system. Iron is the major water quality problem in Chhattisgarh along with fluoride and arsenic in few isolated pockets. State has taken many steps to augment water resources and majority of the steps are through traditional systems like ponds, bawris, dugwell etc. It was also informed that PHED, Chhattisgarh will engage Lab Chemists and Lab Assistants shortly and will provide training to them. The representatives from Chhattisgarh informed that in Bijapur and Narayanpur districts of Chhattisgarh, water quality testing laboratories are established in schools and FTK's are being provided to engage school-children in water quality programme. In these districts, Chemistry teachers have agreed to act as facilitators for enabling rural peoples testing quality of water sources. Few NGO's are also working to implement the programme. It was informed that Jalmani programme has been implemented in approximately 50% of the total schools. The State also proposed to outsource running of 2 labs. The West Bengal model was suggested in this context.

Representative from Chhattisgarh wanted to know how the expenses for consumables will be met upon which the Chairman said that the same could be met from from NRDWP-Support fund. The Chairman also suggested devising proper O & M policy which could be State- specific.

Engineer-in-Chief, Chhattisgarh also requested that permission be given for installing spectrophotometer at sub divisional level and above. He said this would reduce the requirement of space, manpower and running costs compared to traditional

lab requirement. After ascertaining views of all members, Chairperson agreed that DDWS would issue circular to allow purchase of spectrophotometer provided O & M for 5 years and trained manpower was available.

5.4 Rajasthan

Mr. Vinay Mathur, Chief Engineer (Rural) from Rajasthan informed that out of total 34,880 water quality affected habitations, 23,168 habitations are salinity affected and 10,788 habitations are fluoride affected. Thus, fluoride and salinity are the major problems in drinking water in Rajasthan. Districts falling particularly in western Rajasthan are more affected by salinity.

Mr. Mathur informed that there are 23,168 salinity affected habitations in Rajasthan out of which 1,473 nos. habitations are targeted to be covered in this year i.e. 2010-11 and similar no. of habitation has been proposed to be covered in year 2011-12 and year 2012-13 leaving aside 18,749 habitations, which would be covered through major projects later on. He said that it is expected that Rajasthan will be able to completely address the water quality problems by year 2022. He informed that for addressing fluoride problem in drinking water, Rajasthan Integrated Fluoride Mitigation program (RIFMP) has been taken up to provide safe drinking water to fluoride affected habitations of the state in phased manner by providing 6000 defluoridation units on handpumps with 5 year O & M contract. He said all 10,788 fluoride affected habitations would be covered in the next 2 years.

He said that the Annual Action Plan is a guiding document for the state as it will help in implementing, monitoring and formulating all rural drinking water schemes in Rajasthan more effectively. He further informed that Rajasthan has already started benchmarking drinking water sources in rural areas and it has also got an evaluation study done for hand-pump efficiency. Mr. Mathur requested officials from DDWS to facilitate in providing proper technological know-how to deal with water quality problems.

The Chairman enquired about O & M cost of fluoride treatment system in Rajasthan upon which Mr. Vinay Mathur informed that cost of water treatment is Rs 40,000/unit and an additional Rs 1000/month for 5 years Operation & Maintenance. He also said that the average capital cost per hand pump attached defluoridation unit is Rs 1 lakh which includes Operation & Maintenance, cost of hand pumps, spare parts and regeneration of the media.

The Chairman agreed in principle for financial support for coverage of additional SC, ST & Minority habitations which could not be marked on IMIS and for which, funds have not been provided under NRDWP allocation. The Chairman also gave his consent on request of Shri Vinay Mathur to visit Rajasthan with Senior officials from the Department to discuss and develop plan/ strategy on issues related to drinking water in the State of Rajasthan.

5.5 Orissa

Shri R.L. Jamuda, Pr. Secretary, Rural Development, Government of Orissa informed that Government of Orissa has accorded top priority for fluoride mitigation. He said that all water quality affected habitations will be covered with safe drinking water in phased manner depending upon the severity of the problem and availability of fund. He also informed that steps have been taken to promote traditional wells and old existing wells are being rejuvenated. It was suggested that sanitary wells are a good option in Orissa since the water table is generally high. FTK's have been distributed in many Gram Panchayats and people have been trained at grass root level. All district water quality laboratories are functional. 42 new labs are to be set up.

The Chairman said that MNREGS is a boon for augmenting drinking water availability and the programme should be properly integrated with NRDWP in Orissa for rejuvenation of sources, traditional village ponds etc. The Chairman suggested that the State should work out the amount required to cover all habitations with PWSS. He also said GIS mapping of villages covered with PWSS should be done to enable better planning.

5.6 West Bengal

Mr. K. Das, Joint Secretary, PHED, Government of West Bengal and Mr. Sandeep Chatterjee, Chief Engineer PHED, Government of West Bengal said that to tackle arsenic problem in drinking water in West Bengal, implementation of a master plan to cover all such habitations by PWSS is expected to be completed by 2012.

Mr. Das, also informed that Public Private Partnership Model in providing safe drinking water where private agency could be involved in operation and maintenance by giving them a long term contract will assure quality of water. Secondly, he requested that the capacity to manufacture terra filter should be strengthened in West Bengal. The Chairman suggested that if Government of West Bengal intends to take up any PPP module for O & M on pilot project basis to address arsenic problem, may be sent to DDWS for consideration. Regarding water quality testing while the State had done well to set-up block level labs, it should also provide FTK's to GP's to ensure community surveillance.

5.7 Uttar Pradesh

Mr. Manoj Kumar, Secretary, Rural Development informed that Field Test Kits (FTK's) have already been distributed in all districts of U.P. and, for implementing Jalmani programme in Schools, e-tender has already been floated. He said that installation of Jalmani units in schools will be achieved by the end of October 2010. He further informed that they have engaged IIT Kanpur and UNICEF for assessing upgradation requirements of district water testing laboratories. Mr. Satya Prakash, Chief Engineer (Rural), U.P. Jal Nigam informed that U.P Jal Nigam came to know about

fluoride problems in drinking water in Sonbhadra district only when a Human Rights group raised the issue. The Chairman advised U.P. Jal Nigam to conduct regular water quality testing involving GP's and strengthening labs so that it could itself know the situation rather than being informed by other external agencies. He also directed U.P. Jal Nigam to conduct two workshops, one each at Lucknow and Varanasi or Muradabad at the earliest convenience to update knowledge and technologies of district and State level officials on implementing water quality schemes/sustainability structures. He said that at least one workshop should be conducted immediately in Lucknow. The Chairman also said that District Collectors and senior PHED Engineers as well as few representatives from PRI's should also be present in the proposed workshop, wherein he himself will be present.

The Chairman advised the State Government to speed-up implementation of sustainability schemes for Bundelkhand and U.P. Jal Nigam to use HGM maps for finding appropriate locations for siting sustainability structures. He further said that all relevant information should be entered in time into online IMIS.

4.8 Maharashtra

The Chairman said that Maharashtra has a good plan for covering water quality affected habitations but wanted to know whether anything innovative, cost effective steps for treating specific water pollutants or for sustainability structures is being taken-up in Maharashtra. Mr. Nipun Vinayak, Deputy Secretary from Government of Maharashtra informed that out of total 2177 water quality affected habitations in Maharashtra, 489 habitations have been covered till August 2010 which is 22 % of the total target. He said that at many places, schemes have been handed-over to Gram Panchayats and power tariff of water supply schemes is also partially paid by Government of Maharashtra. Mr. Vinayak also said that retendering has been done for implementing Jalmani programme in Maharashtra and installation of water purification systems in rural schools will begin from December positively. He also said that Maharashtra has done commendable work in hydro-fracturing and unconventional blasting techniques which were a part of strategy for achieving sustainability of drinking water schemes. West Bengal requested that details of hydrofracturing & boreblasting be sent to their State which was agreed to.

Outcome of the meeting:

- The Karnataka model for iron removal in drinking water could be replicated in all States where iron is a major drinking water quality problem.
- DDWS to send information on all the existing technologies to all States.
- Convergence of drinking water schemes with MNREGS should be adopted for sustainability.
- Replicate Tamil Nadu's model of developing village ponds with proper catchment treatment and supply channels for providing safe drinking water in arsenic and fluoride affected habitations.
- Result oriented and effective IEC strategy should be in place. IEC campaign in iron affected water quality habitations must raise awareness that keeping water still in a pot for sometime reduces iron content automatically in drinking water.
- Rajasthan could send proposal for coverage of additional SC, ST & Minority habitations which could not be marked earlier on IMIS . All districts Should have establish district water quality laboratories at the earliest to test all water sources for physical and chemical contamination. Adequate trained manpower should be employed in district water quality laboratories on contract/regular/outsourcing basis.
- States to implement Jalmani programme more effectively and to submit Utilization Certificates at an early date.
- Training courses should be conducted for all lab manpower on testing parameters.
- DDWS would issue circular that spectrophotometer could be provided in lieu of other testing equipment provided the lab technicians are trained and O & M contract for 5 years is included in the purchase terms.
- All States were requested to make provision for testing of private samples in their labs on payment of specified charges. Urban local bodies could also test their samples in the labs on payment.
- States can look at West Bengal model of outsourcing the establishment and running of sub divisional labs to NGO's, or to educational institutions as in Kerala, Gujarat & J & K.
- All States should work out the financial resources required to cover all habitations with piped water supply schemes.

The meeting ended with a vote of thanks to and from the Chair.

Annexure

List of participants of the Meeting held with select States having significant water quality problems and Strategies to tackle them held on 17 /09/2010

S.No	Name	Designation & Office	E-mail Address
1	Shri Arun Kumar Misra	Secretary Dept. of Drinking Water & Sanitation Nirman Bhavan, New Delhi	secydws@nic.in
2.	Shri T.M. Vijay Bhaskar	Joint Secretary Dept. of Drinking Water & Sanitation 9 th Floor Paryavaran Bhavan CGO complex New Delhi-03	jstm@nic.in
3.	Shri Sujoy Mojumdar	Director (Water Quality & Coord.) 8 th Floor Paryavaran Bhavan CGO complex New Delhi-03	Sujoy.m@gmail.com
4.	Dr. Kamal Mazumdar	Deputy Advisor Dept. of Drinking Water & Sanitation 9 th Floor Paryavaran Bhavan CGO complex New Delhi-03	k.mazumdar@gmail.com
5.	Shri D. Rajasekhar	Deputy Advisor Dept. of Drinking Water & Sanitation 9 th Floor Paryavaran Bhavan CGO complex New Delhi-03	sharathraj2008@gmail.com
6.	Shri Ved Prakash	Senior Consultant 9 th Floor Paryavaran Bhavan CGO complex New Delhi-03	seniorconsultantddws@gmail.com
7	Dr. Brajesh K. Shrivastava	Consultant(WQ) Dept. of Drinking Water & Sanitation 9 th Floor Paryavaran Bhavan CGO complex New Delhi-03	brajesh979@rediffmail.com
8	Mr. Manish Thakur	Consultant(IEC) Dept. of Drinking Water & Sanitation 9 th Floor	manish_tiss333@rediffmail.com

		Paryavaran Bhavan CGO complex New Delhi-03	
9	Shri Dilip Kumar Dash	Additional Chief Engineer, PHED, Assam	Dkdas2608@gmail.com
10	Shri Dinesh Shrivastava	Secretary-PHED, Chhattisgarh D.K. Bhavan, Mantralay Raipur (CG)	
11	Shri P.K.Panigrahi	Chief Engineer, RWSS, Orissa	cerwss@ori.nic.in
12	Shri Satya Parkash Kureel	Chief Engineer(Rural) U.P. Jal Nigam, Lucknow	Cer_jn@yahoo.com
13	Shri A.K. Shrivastava	Managing Director U.P. Jal Nigam, Lucknow, UP	
14	Shri Manoj Kumar Singh	Secretary- Rural Development, Govt. of Uttar Pradesh	Mks2973@yahoo.com
15	Shri R.L. Jamuda	Principal Secretary Rural Development, Orissa	Rdsec.or@nic.in
17	Shri H.K. Hingorani	Chief Engineer, PHED, Chhattisgarh	
18	Shri Ravindra Panwar	Pr. Secretary, PHED, Govt. of Bihar	Panwar60@rediffmail.com
19	Shri Nipun Vinayak	Deputy Secretary, WS&S Department, Govt. of Maharashtra	vinayaknipun@gmail.com
20	Shri Vinay Kumar Mathur	Chief Engineer, PHED, Rajasthan	Raj_ce@nic.in
21	Shri Sandip Chatterjee	Chief Engineer-PHED, Govt. of West Bengal, Kolkata	Ce_pwgm@wbphed.gov.in
22	Shri K. Das	Joint Secretary, PHED, Govt. of West Bengal, Kolkata	